

CLAIM LISTING

1-37. (Canceled)

38. (Previously Presented) Crystalline Hepatitis C virus helicase comprising a tetragonal crystal having unit cell dimensions of $a = b = 109 \text{ \AA} \pm 3 \text{ \AA}$; $c = 84 \text{ \AA} \pm 2 \text{ \AA}$; $\alpha = \beta = \gamma = 90^\circ$; and space group P4₁; the unit cell containing two molecules in an asymmetric unit.

39. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 38 wherein the amino acid sequence of the Hepatitis C virus helicase is SEQ ID NO:1.

40. (Previously Presented) Crystalline Hepatitis C virus helicase comprising an orthorhombic crystal characterized by unit cell dimensions of $a = 66 \text{ \AA} \pm 2 \text{ \AA}$; $b = 110 \text{ \AA} \pm 3 \text{ \AA}$; $c = 64 \text{ \AA} \pm 2 \text{ \AA}$; $\alpha = \beta = \gamma = 90^\circ$; and a space group P2₁2₁2; the unit cell containing one molecule in the asymmetric unit.

41. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 40 wherein the amino acid sequence of the Hepatitis C virus helicase is SEQ ID NO:1.

42. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 38 wherein the Hepatitis C virus helicase is amino acid sequence SEQ ID NO:1 and wherein the crystalline Hepatitis C virus helicase effectively diffracts x-rays to a resolution of 1.5 \AA to 3 \AA .

43. (Previously Presented) A composition comprising crystalline Hepatitis C virus helicase of any of claims 38-41.

44-46. (Canceled)

47. (Original) A method for incorporating a chemical entity in a crystal comprising placing a tetragonal crystal of Hepatitis C virus helicase having unit cell dimensions of $a = b = 109 \text{ \AA} \pm 3 \text{ \AA}$; $c = 84 \text{ \AA} \pm 2 \text{ \AA}$; $\alpha = \beta = \gamma = 90^\circ$; the unit cell containing two molecules in an asymmetric unit; and space group P4₁ in an aqueous solution comprising about 1mM to about 10mM chemical entity, and 0% by weight to about 15% by weight DMSO.

48. (Original) A method for incorporating a chemical entity in a crystal comprising placing an orthorhombic crystal of Hepatitis C virus helicase having unit cell dimensions of $a = 66 \text{ \AA} \pm 2 \text{ \AA}$; $b = 110 \text{ \AA} \pm 3 \text{ \AA}$; $c = 64 \text{ \AA} \pm 2 \text{ \AA}$; $\alpha = \beta = \gamma = 90^\circ$; the unit cell containing one molecule in the asymmetric unit; and a space group P2₁2₁2 in an aqueous solution comprising about 1mM to about 10mM chemical entity, and 0% by weight to about 15% by weight DMSO.

49-50. (Canceled)

51. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 38 wherein the Hepatitis C virus helicase is amino acid sequence SEQ ID NO:1, with the proviso that at least one cysteine or methionine is replaced with selenocysteine or selenomethionine, respectively.

52-54. (Canceled)

55. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 38 wherein the Hepatitis C virus helicase crystal comprises atoms arranged in a spatial relationship represented by the structure coordinates listed in Table 1.

56. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 38 wherein the Hepatitis C virus helicase crystal comprises atoms arranged in a spatial relationship represented by the structure coordinates listed in Table 2.

57. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 40 wherein the Hepatitis C virus helicase crystal comprises atoms arranged in a spatial relationship represented by the structure coordinates listed in Table 3.

58. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 38 wherein the Hepatitis C virus helicase crystal is prepared by a method comprising growing a crystal from a precipitant solution comprising purified Hepatitis C virus helicase, about 3% by weight to about 14% by weight PEG, about 5% by weight to about 15% by weight DMSO, and about 0.05M to about 0.07M potassium phosphate, wherein the amino acid sequence of the Hepatitis C virus helicase is SEQ ID NO:1.

59. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 40 wherein the Hepatitis C virus helicase is prepared by a method comprising growing a crystal by vapor diffusion with macro-seeding from a precipitant solution comprising purified Hepatitis C virus helicase, HEPES, and about 4% by weight to about 14% by weight mono-alkyl ether of PEG, wherein the amino acid sequence of the Hepatitis C virus helicase is SEQ ID NO:1.

60-61. (Canceled)

62. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 40 wherein Hepatitis C virus helicase is amino acid sequence SEQ ID NO:1 and wherein the crystalline Hepatitis C virus helicase effectively diffracts x-rays to a resolution of 1.5 Å to 3 Å.

63. (Previously Presented) The crystalline Hepatitis C virus helicase of claim 40 wherein the Hepatitis C virus helicase crystal is amino acid sequence SEQ ID NO:1, with the proviso that at least one cysteine or methionine is replaced with selenocysteine or selenomethionine, respectively.